

*admitted*  
activated oligonucleotide, washing said intermediate activated oligonucleotide to form washed oligonucleotide, and contacting said washed oligonucleotide with said further oligonucleotide and ligase, thereby coupling said first oligonucleotide with said further oligonucleotide.

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**REMARKS**

Claims 1-56 are pending in the application. Claim 23 is amended herein. Support for the amendment is found in the specification as filed at page 17, lines 7-27. Accordingly, no new matter is introduced by way of this amendment.

Applicants acknowledge the Requirement for Restriction and hereby traverse in part. However, in order to be fully responsive to the Office Action, the Applicants provisionally elect Group I (Claims 1-9).

The Office Action requires restriction of eight groups of claims: Group I (claims 1-9); Group II (claim 10); Group III (claims 11-22); Group IV (claims 23-25); Group V (claims 26-39); Group VI (claims 40-52); Group VII (claims 53 and 55); and Group VIII (claims 54 and 56). Applicants respectfully request reconsideration of the Requirement with respect to Groups I (claims 1-9), III (claims 11-22), and IV (claims 23-25).

Two criteria must be met in order for a requirement for restriction to be proper: (1) the inventions must be shown to be independent and distinct; and (2) there must be a serious burden on the examiner, such as a showing of a separate classification, separate status in the art, or a different field of search. See MPEP § 803.

The Office Action states that, in the instant case, Groups I, III, and IV are unrelated because they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (citing MPEP §806.04, MPEP §808.01). It

is asserted that:

[t]he method step of coupling the oligonucleotides to form a plurality of coupled oligonucleotides of Group I is not required by the claims of Groups III, IV, . . . . The method step of blocking the 3' end of the oligonucleotides with a blocking group to form a plurality of blocked nucleotides of Group III is not required by the claims of Group I, IV, . . . . The method step attaching the first oligonucleotide to a solid support of Group IV is not required by the claims of Group I, III, . . . .

Office Action at 3.

Applicants assert that Groups I, III, and IV are related, and thus are not independent inventions. The method step of coupling oligonucleotides to form a plurality of coupled oligonucleotides is recited in Groups I (*see* claim 1, step (a)) and III (*see* claim 11, step (b)). Additionally, the amendment to claim 23 (Group IV) clarifies that the step of contacting the washed intermediate activated oligonucleotide with the further oligonucleotide couples the oligonucleotides. As stated in the specification, solid support may function as a blocking group. *See* specification at 14, line 8. Accordingly, Group IV (*see* claim 23, "wherein said first oligonucleotide is attached to solid support") may include the method step of blocking the 3' end of oligonucleotides as recited in Group III (*see* claim 11, step (a)). Applicants assert that Groups I, III, and IV are strongly related since they all encompass methods involving coupling of oligonucleotides

MPEP §§ 806.04 and 808.01 reveal a far different relationship for inventions that "are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects." Office Action at 3. MPEP § 806.04 provides examples of such independent inventions. The section states that a shoe and a locomotive are examples, as are a process of painting a house and a process of boring a well. The instant set of groups all encompass methods involving coupling of oligonucleotides. Certainly the rules of Patent Practice envisioned far more distinct inventions before requiring restriction under this

section. The Examiner Note of MPEP § 808.01 states that the cited paragraph is only to be used for independent inventions such as a necktie and a locomotive bearing. Thus, the Office Action fails to show that the claims identified in Groups I, III, and IV are independent in order to properly justify a Requirement for Restriction.

Applicants also submit that no serious burden on the Examiner exists. According to the MPEP § 808.02, the Examiner may insist upon restriction for related inventions only if they are shown to be distinct AND if one of three criteria is demonstrated: (1) separate classification, (2) separate status in the art, or (3) a different field of search is required. Applicants submit that a search of the claimed methods of Group I would encompass a search of the claimed methods of Groups III and IV. Additionally, the inventions have not been shown to occupy a separate status in the art. Further, the claims of Groups I and III are classified in Class 435.

As the inventions of Groups I, III, and IV are related and a search thereof would not be unduly burdensome, Applicants request reconsideration and withdrawal of the requirement for restriction with respect to Groups I, III, and IV. Should Groups I, III, and IV be rejoined, Applicants would elect Groups I, III, and IV.

At a minimum, Applicants assert that Groups I and III should be rejoined. Should Groups I and III be rejoined, Applicants would elect Groups I and III.

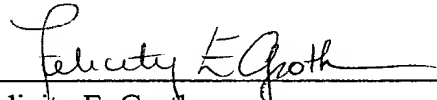
An election of species within Group III also is required. Applicants traverse. Nonetheless, to be fully responsive, Applicants elect magnetic beads. Claim 11, 14, and 15 are readable thereon.

CONCLUSION

Applicants believe this amendment to be fully responsive. Reconsideration and withdrawal of the requirement for restriction is respectfully requested. Applicants submit that the present claims meet all the requirements for patentability. The Examiner is respectfully requested to allow all the solicited claims. Applicants invite the Examiner to contact the undersigned at (215) 557-5908 to clarify any unresolved issues raised by this response.

Respectfully submitted,

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Attachments

Version with Markings to Show Changes Made

**VERSION WITH MARKINGS TO SHOW CHANGES MADE****In the claims:**

Please amend claim 23 as follows:

23. (Amended) A method of coupling a first oligonucleotide with a further oligonucleotide, wherein said first oligonucleotide is attached to solid support, comprising contacting said first oligonucleotide with ligase and cosubstrate to form an intermediate activated oligonucleotide, washing said intermediate activated oligonucleotide to form washed oligonucleotide, and contacting said washed oligonucleotide with said further oligonucleotide and ligase, thereby coupling said first oligonucleotide with said further oligonucleotide.